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Gemini UK Wireless Microphone Frequencies

UK models only

When using two or more wireless microphones, or *radiomics*, it is important to select two frequencies which are more than 0.5 MHz apart to avoid co-channel interference and intermodulation between the systems

All channels on these wireless microphones are in channel 70 - they are deregulated and license free in the UK & EU

The 2017 Gemini UHF-04 series of wireless microphones can operate on 4 different frequencies between 863.150 MHz and 864.850 MHz

Ch 1 - 863.150 MHz deregulated
Ch 2 - 863.725 MHz deregulated
Ch 3 - 864.150 MHz deregulated
Ch 4 - 864.850 MHz deregulated

The 2017 Gemini UHF-116 series of wireless microphones can operate on 16 different frequencies between 863.100 MHz and 864.900 MHz

It is possible to use up to four UHF-116 systems in the same venue

Place the receivers at least 3 metres (10 feet) away from the wireless microphone transmitters but within range

863.100 MHz
863.200 MHz
863.300 MHz
863.400 MHz
863.600 MHz
863.700 MHz
863.800 MHz
863.900 MHz
864.100 MHz
864.200 MHz
864.300 MHz
864.400 MHz
864.600 MHz
864.700 MHz
864.800 MHz
864.900 MHz

The Gemini UX series of wireless microphones can operate on 16 different frequencies between 863.100 MHz and 864.900 MHz

It is possible to use up to four UX systems in the same venue

Place the receivers at least 3 metres (10 feet) away from the wireless microphone transmitters but within range

The diagram in the Gemini user guide shows the DIP switch configuration for the 16 different frequencies - the black portions of the diagram in the user manual relate to the moving white parts of the DIP switch

To obtain maximum channel separation when using multiple units, the following four frequencies are recommended: SWITCH POSITIONS U=up, D= down - but remember only a maximum of four systems will work together

Channel	Frequency - MHz	DIP Switches
Ch 1	863.125	DDDD
Ch 9	863.625	DDUD
Ch 4	864.125	UUDD
Ch 12	864.625	UUUD

Please note that Gemini changed their deregulated frequency sets in recent years

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Legacy frequency set:

Channel	Frequency - MHz	DIP Switches
Ch 1	863.125	DDDD
Ch 2	864.250	DUDD
Ch 3	863.250	UDDD
Ch 4	864.125	UUDD
Ch 5	863.375	DDDU
Ch 6	864.500	DUDU
Ch 7	863.500	UDDU
Ch 8	864.375	UUDU
Ch 9	863.625	DDUD
Ch 10	864.750	DUUD
Ch 11	863.750	UDUD
Ch 12	864.625	UUUD
Ch 13	864.000	DDUU
Ch 14	864.875	DUUU
Ch 15	863.875	UDUU
Ch 16	UNUSED	UUUU

Later frequency set:

Channel	Frequency - MHz	DIP Switches
Ch 1	863.050	DDDD
Ch 2	863.150	DDDU
Ch 3	863.300	DDUD
Ch 4	864.400	DDUU
Ch 5	863.550	DUDD
Ch 6	863.650	DUDU
Ch 7	863.800	DUUD
Ch 8	863.900	DUUU
Ch 9	864.050	UDDD
Ch 10	864.200	UDDU
Ch 11	864.350	UDUD
Ch 12	864.450	UDUU
Ch 13	864.600	UUDD
Ch 14	864.700	UUDU
Ch 15	864.850	UUUD
Ch 16	864.950	UUUU

64ch UK Wireless Microphone Frequencies

UK models only

When using two or more wireless microphones it is important to select two frequencies which are more than 0.5 MHz apart to avoid co-channel interference and intermodulation between the systems

Gemini 64 channel wireless microphones can operate on 64 different frequencies in Ch 69 and Ch 70 - only those between 863.000 MHz and 865.000 MHz in Ch 70 are legal in the UK & EU

Please note that Ch 69 frequencies 854.000 MHz to 862.000 MHz and are no longer licensable within the UK

Gemini recommended that you only use channels selected from a single group for multi channel operation

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8
	Frequency - MHz							

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Ch 1	854.375	858.500	854.500	859.250	854.625	859.500	854.750	859.625
Ch 2	854.875	858.875	855.125	859.750	855.250	859.875	855.375	860.250
Ch 3	855.500	859.375	855.625	860.375	855.750	860.500	856.125	860.625
Ch 4	855.875	860.125	856.250	860.875	856.375	861.125	856.625	861.375
Ch 5	856.500	860.750	856.750	861.625	856.875	861.750	857.250	863.250 deregulated
Ch 6	857.125	861.250	857.375	863.375 deregulated	857.500	863.500 deregulated	857.625	863.625 deregulated
Ch 7	857.750	861.500	857.875	863.750 deregulated	858.250	864.250 deregulated	858.375	864.375 deregulated
Ch 8	858.125	861.875	856.625	864.500 deregulated	858.750	864.625 deregulated	859.125	864.750 deregulated

16ch USA Wireless Microphone Frequencies

USA models only - UX Series

These units can not be licensed for use in the UK

	Frequency - MHz
Ch 1	790.375
Ch 2	791.125
Ch 3	792.125
Ch 4	793.250
Ch 5	794.250
Ch 6	795.125
Ch 7	796.250
Ch 8	797.375
Ch 9	798.375
Ch 10	799.875
Ch 11	800.875
Ch 12	801.625
Ch 13	802.750
Ch 14	803.875
Ch 15	804.750
Ch 16	805.375

Connecting to Beltpacks

Gemini 16ch belt pack transmitters use two pole locking 3.5mm jack connectors with 7.9mm male thread on plug
Tip mic signal input with bias voltage
Sleeve ground

Gemini 64ch belt pack transmitters use 3 pin mini XLR connectors
Pin 1 ground
Pin 2 mic signal input
Pin 3 bias voltage +Ve

Phantom Power and Wireless Microphone Receivers

Many wireless microphone receivers are not protected from having phantom power connected to their balanced line audio outputs

By connecting a wireless mic receiver to a mixer or amplifier which has phantom power selected can often damage your receiver in moments

You can prevent this damage by having two 2.2mfd (2u2) 63v polarized capacitors in your XLR lead between the receiver and the mixer or amplifier. Taking care to ensure that the capacitors are the correct way round in series with the signals on each of pins 2 and pins 3 of your XLR lead

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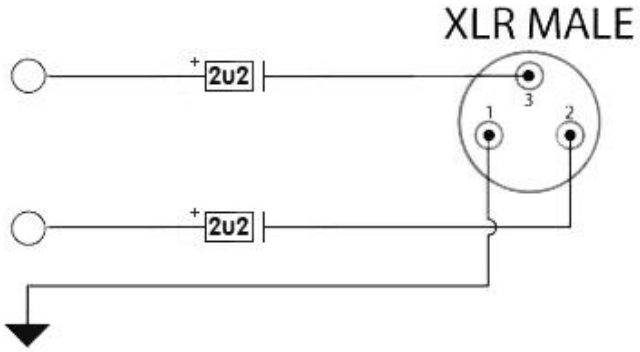


The positive of the capacitor should connect to the receiver and the negative of the capacitor should connect to the mixer or amplifier

Wireless Mic Aerial Lengths

The length of wireless receiving and transmitting aerials is critical and the following nominal values should be used when replacing broken or missing antenna on wireless mic equipment

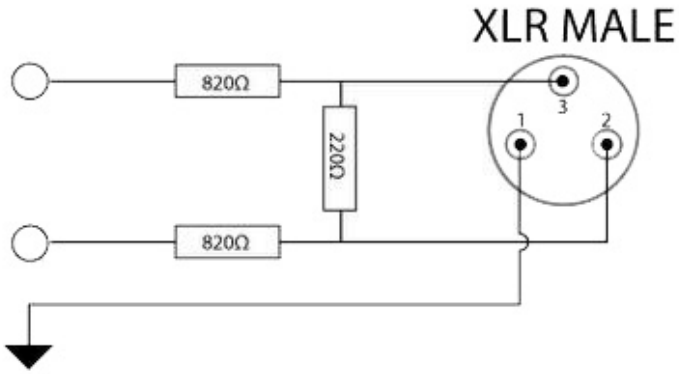
Nominal Frequency	Band - Channel	Frequency Range	1/4 Wavelength Aerial Length
174.0 MHz	VHF	173.800 to 175.000 MHz	16" - 40.75cm
610.0 MHz	UHF - Ch 38	606.000 to 614.000 MHz	4" - 10.25cm
684 MHz	UHF - Ch 46 - 48	672.000 to 696.975 MHz	3.5" - 9cm
858.0 MHz	UHF - Ch 69	854.000 to 862.900 MHz	3.25" - 8.25cm
864.0 MHz	UHF - Ch 70	863.000 to 865.000 MHz	3.25" - 8.25cm

Use double the length for 1/2 wavelength aerials

Attenuator Pads for Mics and Wireless Mic Receivers

Pads or attenuators are often needed to connect a wireless microphone receiver to over sensitive amplifier, PA sound system or mixer inputs. The mic pad will reduce the signal level so that the sound is less distorted and that the operator has more effective control over the volume

18.5db balanced mic pad attenuator



For unbalanced use replace 820 ohm resistor in the signal line with 1600 ohm (1K6) resistor, connect the 220 ohm resistor between signal and earth and do not use a resistor in earth / ground line

If you require less attenuation reduce the 820 ohm resistors to 390 ohms each for a 14db balanced mic pad

For ease, mount the three resistors in the male XLR connector that plugs into the amplifier or mixer

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